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A new species of *Plectromerus* Haldeman from Central America and description of the female of *Plectromerus dezayasi* Nearns & Branham (Coleoptera, Cerambycidae, Cerambycinae, Plectromerini)

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Abstract

A new species, *Plectromerus roncavei*, **sp. n.** (Coleoptera, Cerambycidae, Cerambycinae, Plectromerini), from Honduras and Nicaragua is described and illustrated. Features distinguishing the new species from its congeners as well as a modified key to *Plectromerus* species are presented. In addition, the previously unknown female of *Plectromerus dezayasi* Nearns & Branham is described and illustrated.

Keywords

Honduras, Nicaragua, woodboring beetles, taxonomy

Introduction

Nearns and Branham (2008) conducted a revision and phylogenetic analysis of Plectromerini (Cerambycidae: Cerambycinae). Among the eight new species of *Plectromerus* Haldeman, one was described from a single male specimen (*Plectromerus dezayasi* Nearns & Branham) and three were described from only female specimens (*Plectromerus giesberti* Nearns & Branham; *Plectromerus michelii* Nearns & Branham; *Plectromerus*

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thomasi Nearns & Branham). Subsequently, three additional specimens of *P. michelii* were discovered, and Nearns (2008) described the previously unknown male. Recently, specimens representing a new species of *Plectromerus* from Honduras and Nicaragua, as well as the first known female specimens of *P. dezayasi*, were discovered. The new species and newly discovered female specimens of *P. dezayasi* are described herein.

Methods

Specimens from the following collections were examined for a comparison of characters with the new species. The following acronyms are used throughout the paper:
DDPC Diethard Dauber Private Collection, Linz, Austria
DHPC Dan Heffern Private Collection, Houston, TX, USA
EMEC Essig Museum of Entomology, University of California, Berkeley, CA, USA
FSCA Florida State Collection of Arthropods, Gainesville, FL, USA
RDCC Ronald D. Cave Private Collection, Ft. Pierce, FL, USA

Observations of specimens were made using a Max Erb stereomicroscope with 10× eyepieces. Photographs were taken with Visionary Digital's BK Plus imaging system. Label data are verbatim and placed in quotes.

Plectromerus roncavei **Nearns & Miller, sp. n.**
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Figs 1a–d.

Diagnosis. *Plectromerus roncavei* is one of the largest species in the genus, ranging in length from 8.6–14.1 mm. From congeners, *P. roncavei* is distinguished by the combination of the following characters: intricate elytral pattern; pronotal disk with moderately raised calli; and moderately to strongly, deeply serrate metafemoral teeth. This species is most similar to *P. dezayasi* but is distinguished by the elytral markings (Figs. 1a, 2a); the pronotal surface opaque, with sparse and shallow punctures (pronotal surface moderately shining, with dense, shallow punctures in *P. dezayasi*); the surface of the pronotum with moderately dense, short, recumbent, pale pubescence (absent in *P. dezayasi*); the surface of the meso- and metasterna with moderately dense, short, recumbent, pale pubescence (absent in *P. dezayasi*), and the posterior edge of the metafemoral tooth with about 15–22 serration "peaks" (about 11–14 serration "peaks" in *P. dezayasi*).

Description. Male. Length 8.6–12.4 mm, width 2.1–2.8 mm (measured across humeri). General form narrow, subcylindrical. Integument testaceous, with head, basal antennomeres, portions of pronotum, venter, and femoral apices ferrugineus; each elytron testaceous with three major macular regions as follows: (1) basal third with a ferrugineus, oblique, narrow, arcuate macula beginning below humerus and extending to above sutural midpoint; (2) a second ferrugineus, oblique, narrow, strongly arcuate

macula beginning at about midpoint and extending to below apical third of suture; and (3) apical third testaceous, with broader, ferrugineus, irregular, subreniform macula.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head slightly concave between antennal tubercles, which are slightly raised and separated by about the width of two antennal sockets; vertex

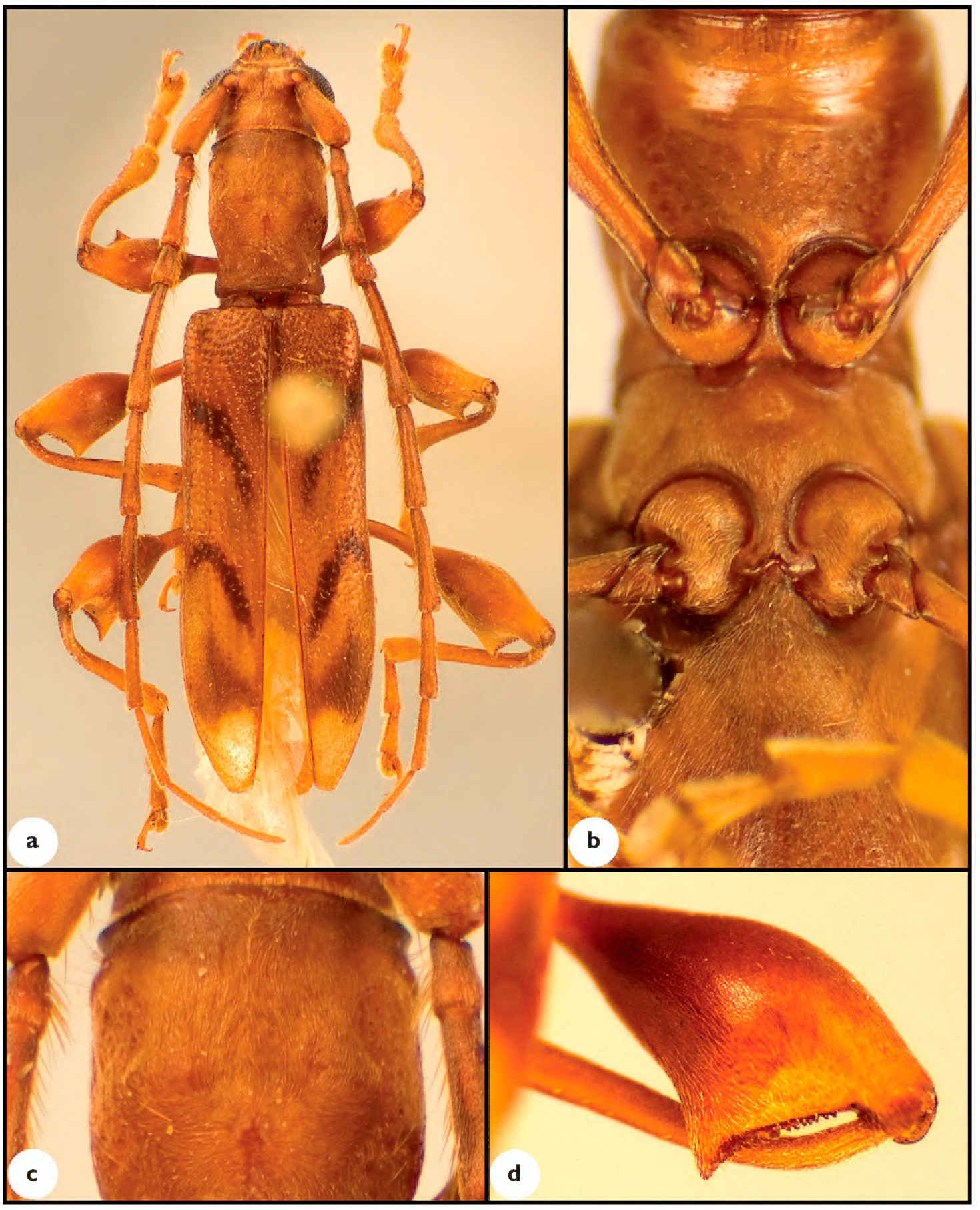

Figure 1. *Plectromerus roncavei* Nearns & Miller, sp. n. **a** dorsal habitus, paratype male **b** closeup of pro- and mesosternum, paratype male **c** closeup of pronotum, paratype male **d** closeup of metafemur and metatibia, dorsal view, holotype male.

microsculptured, with dense, shallow punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with shallow indentations around antennal insertions.

Antennae eleven segmented, slightly longer than body; scape bowed; third antennomere about as long as scape, about twice as long as fourth; fifth antennomere longest, almost 4 times longer than fourth, about 2 times longer than third; antennomeres 6–10 becoming progressively shorter; eleventh slightly longer than tenth; basal antennomeres subcylindrical, from third moderately flattened; apices of antennomeres 5–10 produced externally. Scape with short, recumbent, pale pubescence; antennomeres 2–8 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.3 times as long as wide, widest at middle, slightly broader at apex than base; pronotal sides broadly inflated, arcuately constricted at basal third, with a slight inflation just before apex; basal margin moderately arcuate; disk convex, slightly flattened, with one moderately raised, median callus at about the center; disk with two moderately raised, submedial calli slightly anterior to center, and two moderately raised, submedial calli slightly posterior to center; lateral margins of pronotum with patch of coarse, deep punctures, and two to four long, suberect setae anterolaterally. Basal third of disk with two to four long, pale, recumbent setae positioned submedially, arising from deep punctures. Surface opaque, microsculptured, sparsely and shallowly punctate; surface with moderately dense short, recumbent, pale pubescence (Fig. 1c).

Scutellum small, rounded, almost as long as broad, impunctate. Elytra about 2.7 times as long as width at humeri, about 3 times as long as pronotal length, about 1.5 times broader basally than pronotum at widest point (at middle); sides nearly parallel, slightly sinuate around middle, somewhat evenly rounded to apex; elytral apices individually rounded, nearly subtruncate; epipleural margin strongly sinuate. Elytral disk moderately concave medially, subsuturally, creating a distinct costa on each elytron; base of each elytron moderately raised. Elytral surface strongly shining; elytral punctation moderately dense, coarse, and deep at basal third; punctures becoming more shallow toward apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair.

Venter with portions of prosternum strongly shining; one irregular patch of coarse, deep punctures front of and spanning the width of procoxae (Fig. 1b); narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.3 times width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous; procoxal cavities open behind. Mesosternum surface moderately shining, nearly impunctate; mesosternal surface with moderately dense short, recumbent, pale pubescence (Fig. 1b). Metasternum surface moderately shining, sparsely and finely punctate, with scattered deeper punctures and sparse suberect, pale hairs interspersed; metasternal surface with moderately dense short, recumbent, pale pubescence. Metepisternum clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen moderately shining; finely, shallowly punctate; abdomen with sparse long, suberect, pale hairs and punctures each with short, fine, pale hair; abdominal surface with moderately dense short, recumbent, pale pubescence; fifth sternite broadly subtruncate, about as long as preceding sternite.

Legs with femora pedunculate-clavate; basal portion of metafemora slightly shorter than metafemoral club; meso- and metafemora slightly arcuate, shining, clothed with moderately densely, recumbent, short, pale pubescence; clavate portion darker than base; underside of each femoral club with broad, acute triangular tooth; metafemoral teeth with posterior edge strongly, deeply serrate, with about 15–22 serration "peaks" of uneven height and distribution (Fig. 1d), each peak with short, curved, pale hair; metatibiae slightly sinuate, nearly straight, slightly flattened, about 0.8 times as long as metafemora; metatibiae gradually expanded distally; clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally.

Female. Length 11.8–14.1 mm; width 2.8–3.0 mm (measured across humeri). Similar to male except pronotal sides lacking coarse punctures and prosternum lacking irregular patch of punctures in front of procoxae. Abdomen with terminal sternite evenly, broadly rounded, slightly longer than preceding sternite.

Etymology. We take pleasure in naming this species for Ronald D. Cave, for his contributions to the study of cerambycids and who provided the holotype specimen. The epithet is a noun in apposition.

Specimens examined. Type material: Holotype ♂ (Fig. 1a), "HONDURAS: Yoro, Parq Nac Pico Bonito, San Antonio 900 m, 15°45′03″N 86°59′49″W, 25 February 2001, A. Hernández" (FSCA). Allotype ♀, "NICARAGUA: Jinotega, Datanli Diablo 1200 m, 28–29 IV 2006, leg van den Berghe" (FSCA). Two paratypes as follows: "NICARAGUA, Matag, Matagalpa, Fuente Pura, I-8-1994, E. van den Berghe", 1 ♂ (DHPC); "HONDURAS: Yoro, Parq Nac Pico Pijol, 25 April 1998, RD Cave collector", 1 ♀ (RDCC).

Distribution. Known from Honduras (Yoro Department) and Nicaragua (Jinotega and Matagalpa Departments).

Remarks. Nothing is known about the biology of this species. Thomas et al. (2009) provided a color habitus photograph of the holotype.

Plectromerus dezayasi Nearns & Branham, 2008

Figs 2a–b

Plectromerus dezayasi Nearns & Branham, 2008 was described from a single male specimen (Fig. 2a) collected by Dr. Henry Stockwell in Nicaragua, Jinotega Department, Cerro Chimborazo, 1400 m elevation, 13°02′N, 85°56′W, beating dead branches, 20 November 1971. The holotype is deposited in the EMEC. Two additional specimens collected by Dr. Stockwell, both female, with exactly the same label data are in the STRI. The following description supplements the description of this species using the methods indicated in Nearns and Branham (2008).

Description. Female. Length 8.0–9.5 mm; width 1.8–2.1 mm (measured across humeri). Similar to male except pronotal sides without coarse punctures and prosternum without one irregular patch of coarse, deep punctures in front of each procoxa. Legs similar to males except metafemoral teeth with posterior edge strongly, deeply

Figure 2. *Plectromerus dezayasi* Nearns & Branham, dorsal habitus **a** holotype male **b** female.

serrate, with about 11 serration "peaks" of uneven height and distribution. Abdomen with terminal sternite broadly rounded, slightly longer than preceding sternite.

Modified couplets to key to Species of *Plectromerus*

A modified key to species of *Plectromerus* is presented based on Nearns and Branham's (2008, page 21) key to the genus. In their key, *P. roncavei* will run to couplet 19. Couplets 18–26 can be modified, as presented below, to accommodate this new species as well as the newly described female of *P. dezayasi*.

18(17) Metafemoral teeth with posterior edge moderately to strongly serrate, with 10 or more distinct serration "peaks" **19**

– Metafemoral teeth with posterior edge nearly smooth, at most weakly serrate **24**

19(18) Posterior edge of metafemoral teeth with 15 or more serration "peaks" **20**

– Posterior edge of metafemoral teeth with with about 10–14 serration "peaks" **21**

20(19) Metafemoral teeth with posterior edge moderately serrate, with about 20–24 serration "peaks"; pronotal disk with a slightly raised median callus (Guatemala) ..... ***P. giesberti*** **Nearns & Branham**

– Metafemoral teeth with posterior edge moderately to strongly serrate, with about 15–22 serration "peaks"; pronotal disk with one moderately raised, median callus at about the center; disk with two moderately raised, submedial calli slightly anterior to center, and two moderately raised, submedial calli slightly posterior to center (Honduras, Nicaragua)..... .....***P. roncavei*** **Nearns & Miller, sp. n.**

21(19) Elytral apices broadly rounded; metatibiae slightly sinuate, nearly straight (Nicaragua)..... ***P. dezayasi*** **Nearns & Branham**

– Elytral apices variable; metatibiae moderately to strongly sinuate **22**

22(21) Elytral apices narrowly rounded; pronotal surface moderately shining, often with fine wrinkles, sparse to moderately densely, shallowly, moderately coarse punctation on disk (Puerto Rico, Virgin Islands)..... ***P. ramosi*** **Micheli & Nearns**

– Elytral apices variable; if elytral apices narrowly rounded, then pronotal surface not moderately shining **23**

23(22) Elytral apices broadly rounded to subtruncate; elytra with two major macular regions: basal third of each elytron with a ferrugineus, oblique, narrow, macula beginning below humerus and reaching sutural midpoint; apical third of each elytron with a ferrugineus, arcuate-transverse, narrow macula (Costa Rica, Honduras) ..... ***P. hovorei*** **Nearns & Branham**

– Elytral apices narrowly rounded; elytra usually uniformly testaceous, without distinct macular regions (Dominican Republic) ..... ***P. serratus*** **(Cameron)**

24(18) Metafemoral teeth distinctly wider than base of metatibiae (e.g., Nearns and Branham 2008; Figs. 30c, 35b)..... **25**

– Metafemoral teeth minute, about as wide as base of metatibiae (e.g., Nearns and Branham 2008; Figs. 19c, 29c)..... **26**

25(24) Mesosternum with deep punctures; metafemora suddenly clavate; metafemoral teeth with posterior edge weakly, irregularly serrate (Jamaica) ....***P. unidentatus*** **Fisher**

– Mesosternum without deep punctures; metafemora gradually clavate; metafemoral teeth with posterior edge smooth, not serrate (Cuba) .....***P. pinicola*** **Zayas**

26(24) Body length approx. 5 mm; pronotum with five to nine distinct, small, dark maculae (Cuba)..... ***P. ornatus*** **Fisher**

– Body length approx. 6–8 mm; pronotum variable, but without five distinct, small, dark maculae..... **27**

27(26) Elytral apices broadly rounded (fossil in Dominican amber) .... ***P. tertiarius*** **Vitali †**

– Elytral apices subtruncate (fossil in Dominican amber)..... .....***P. grimaldii*** **Nearns & Branham †**

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